

5 **Abstract**

This invention provides a vaccine that can direct gene transfer and the transfer of other immunogens to follicle associated epithelium or M cells to induce mucosal immunity using M cell ligands for receptor-mediated endocytosis. Also provided are polynucleotides sequences encoding M cell ligand-polybasic component fusion proteins, host cells, and 10 methods of producing such proteins recombinantly and chemically. Further, methods are described for immunizing animal and human subjects against bacterial, viral, parasitic, fungal infectious agents or cancer and methods for assaying mucosal immunity using this vaccine.